

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10/535,545  
Source: IFWP  
Date Processed by STIC: 6/14/06

# ***ENTERED***



IFWP

## RAW SEQUENCE LISTING

DATE: 06/14/2006

PATENT APPLICATION: US/10/535,545

TIME: 10:32:40

Input Set : A:\pto.da.txt

Output Set: N:\CRF4\06142006\J535545.raw

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3 <110> APPLICANT: SOCIETE DE CONSEILS DE RECHERCHES ET D'APPLICATIONS SCIENTIFIQUES
4   (S.C.R.A.S.)
6 <120> TITLE OF INVENTION: Process for preparing recombinant heterocarpine
8 <130> FILE REFERENCE: RS 331 PCT
C--> 10 <140> CURRENT APPLICATION NUMBER: US/10/535,545
C--> 10 <141> CURRENT FILING DATE: 2005-05-18
10 <150> PRIOR APPLICATION NUMBER: FR 02/15563
11 <151> PRIOR FILING DATE: 2002-12-10
13 <160> NUMBER OF SEQ ID NOS: 14
15 <170> SOFTWARE: PatentIn version 3.1
17 <210> SEQ ID NO: 1
18 <211> LENGTH: 10
19 <212> TYPE: PRT
20 <213> ORGANISM: Pilocarpus Heterophyllus (peptide fragment)
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30 <212> TYPE: PRT
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40 <211> LENGTH: 6
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47 1           5
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51 <211> LENGTH: 41
52 <212> TYPE: DNA
53 <213> ORGANISM: Artificial Sequence
55 <220> FEATURE:
56 <223> OTHER INFORMATION: Primer for 5' specific cDNA products
58 <400> SEQUENCE: 4
59 tccaagcagc aaaaactagt gacccagggg ccattatatc t
62 <210> SEQ ID NO: 5
63 <211> LENGTH: 38
64 <212> TYPE: DNA
65 <213> ORGANISM: Artificial Sequence

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67 &lt;220&gt; FEATURE:

68 &lt;223&gt; OTHER INFORMATION: Primer for 3' specific cDNA products

70 &lt;400&gt; SEQUENCE: 5

71 cggatatggac gcggtatttg ctgatgggtgt tgatgtaa

38

74 &lt;210&gt; SEQ ID NO: 6

75 &lt;211&gt; LENGTH: 1675

76 &lt;212&gt; TYPE: DNA

W--&gt; 77 &lt;213&gt; ORGANISM: Pilocarpus Heterophyllus (5' cDNA fragment of the cDNA encoding for

78 heterocarpine)

80 &lt;400&gt; SEQUENCE: 6

81 ctaatacgac tcactatagg gcaagcagtg gtatcaacgc agagtacgcg gggatgcccc 60  
 83 aagctaattc ttatcttttt tctttctttt tgttgttgtt ttgtcaaagc agcaatgagg 120  
 85 tctaggaatg gtgttcttca tttattcctt ttogttcttg catggcttct gttggcggt 180  
 87 ctccatgcta actcaagttc ggatgagaga tcaacatata tagttcatat ggacaagacc 240  
 89 catatgcccc aaaccttctc tagccccac cattggtaact cttcggtcgt tcgatccctc 300  
 91 aagtctacaa agccaaccaa attaaatcgc cgtcgatcct caccacttct tgtatactct 360  
 93 tacgacaatg ctgctcatgg ttccagtgcg gttttatctc aacaggaact tgaaactcta 420  
 95 aaaaagtctc cagggttctg ctcagtttat gccgataaga cagcgacact tgacaccacc 480  
 97 cagcacaatg aatttctctc cctgaatact gccaacgggt tgtggcctgc ttcaaagtat 540  
 99 ggtgaagata taattgttgg tgttattgac agcgggtgtc gcccgagag tgaaagttat 600  
 101 aatgatgatg gtatgggcgc tattccaagc agatggaagg gagaatgtga agctggacaa 660  
 103 gagttcaatt cctccatgtg caactcaaag cttattggag ctatatattt cgataaggg 720  
 105 atcattgagg caaatcctgg gattaacatt agcatgaaat ctgccagaga tactatgggg 780  
 107 catgggactc acacatcctc cacagttgct gggaattatg tggatggcgt ttcattcttt 840  
 109 ggctatgcta aaggtacagc aaaaggagtg gcaccacggg cgagagtggc tatgtacaag 900  
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 117 gcaggaaatg cagggccagc gctagggagc ttgcacaatg gaatcccatg gacgttaact 1140  
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 127 gcatcgaaca ttccggggagc catatttgtt tcagattatg atgctgaatt atttgaactt 1440  
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 131 tacgccagca atgatgtgaa acctaaaggc agcatcaagt tccaacaaac tgttctgggc 1560  
 133 acaaagcctg caccagccgt ggctttctat acttctagag gtccgctacc gagctatcca 1620  
 135 ggcatcttaa agccagatat aatggccctt gggtcactag tttttgctgc ttgga 1675

138 &lt;210&gt; SEQ ID NO: 7

139 &lt;211&gt; LENGTH: 1689

140 &lt;212&gt; TYPE: DNA

W--&gt; 141 &lt;213&gt; ORGANISM: Pilocarpus Heterophyllus (3' cDNA fragment of the cDNA encoding for

142 heterocarpine)

144 &lt;400&gt; SEQUENCE: 7

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 147 tgagaccccg ttgtatgaag atcctatagc aattgcctca ttcgctgcta cagagaaggg 120  
 149 cgtagtggtc tcatcttcag caggaaatgc agggccagcg ctaggagct tgcacaatgg 180  
 151 aatcccatgg acgttaactg ttgcagctgg aaccattgac cgttcatttg caggcactat 240  
 153 aactcttggg agtggggaaa ccatcattgg atggacaatg ttcccagcca gtgcttatgt 300

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157 atctcaactc cgaactgacg ccactcatcg atgcgaagaa gctgaagatt cggatatctga 420
159 gcaaatatct gttgtcagtg catcgaaacat tccggggagcc atatttgttt cagattatga 480
161 tgctgaatta tttgaacttg gtggtgtgac tattcctggg gtcgtgatta gcaccaagga 540
163 tgcaccggct gtgatcagct acgccagcaa tgatgtgaaa cctaaggcaa gcatcaagtt 600
165 ccaacaaact gttctgggca caaagcctgc accagccgtg gctttctata cttctagagg 660
167 tccgtcaccg agctatccag gcatctttaa gccagatata atggccctcg ggtcactagt 720
169 ttttgctgct tggattccaa atctgtctac agcccaaatt ggtttgaata cctcttgad 780
171 aagtgaatac aatatggttt ctggaacatc aatggcctgc cctcatgctg ctggtgtagc 840
173 tgctctcctt aagggcgac accctgaatg gagtgcagct gctattaggt ctgcaatgat 900
175 gactacagca aatcccttgg ataacacact aaatccaatc cgggacaatg gtctaataa 960
177 tttcacatct gcttcacctt tagctatggg agccggccaa gttgatccta atcgggcact 1020
179 tgatcctggg ttgatttatg aaaccacccc acaagattat gtgagcctcc tctgactct 1080
181 gaacttcacc caaaacaaaa tccgtgccat tacaagatca aaccggtaca gctgctccac 1140
183 ccctaatact gatcttaact atccttcttt tattacttta cactacaaca caaatgcaac 1200
185 atttgttcag acttttcaca ggactgtgac taacgttggg ggaagcgcta caacttaca 1260
187 ggccaagatc actgctctc taggttctgt agttagtgtc tcaccagaca cattggcctt 1320
189 cagaaagcag tatgagcagc agagctacga gctcactatt gagtacaagc ctgatggtga 1380
191 agaaactggt tcatttgggg aactctgttg gattgaagaa aatgggaatc acactgtgag 1440
193 gagccctatt acagtgtcac ctccatgag taactttgtg tttatgggta cacaataatt 1500
195 gataaaaaatt tgttctgac acaactgtgg gaataatcga cgtttatgaa cccagaataa 1560
197 gttgtttggg cgtcttcaac attatcataa aggacttgaa tcatgtgtgt tgattttctg 1620
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201 tcgtattag 1689
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205 <211> LENGTH: 2630
206 <212> TYPE: DNA
207 <213> ORGANISM: Pilocarpus Heterophyllus (cDNA encoding for heterocarpine)
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212 aagctaattc ttatcttttt tctttctttt tgttgttgtt ttgtcaaagc agcaatgagg 120
214 tctaggaatg gtgttcttca tttattcctt ttcggttctt catggcttct gttggcggt 180
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218 catatgccc aaccttctc tagcccccac cattggtact cttcggtcgt tccatccctc 300
220 aagtctacaa agccaaccaa attaaatcgc cgtcgatcct caccacttct tgtatactct 360
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224 aaaaagtcct caggtttcgt ctccagttat gccgataaga cagcgacact tgacaccacc 480
226 catacacctg aatttctctc cctgaataact gccaacgggt tgtggcctgc ttcaaagtat 540
228 ggtgaagata taattgttgg tgttattgac agcgggtgtc ggccggagag tgaaagtat 600
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234 atcattgcgg caaatcctgg gattaacatt agcatgaaat ctgccagaga tactatgggg 780
236 catgggactc acacatcctc cacagttgct gggaattatg tggatggcgt ttcattcttt 840
238 ggctatgcta aaggtagcgc aaaaggagtg gcaccacggg cgagagtggc tatgtacaag 900
240 gtcatttttg acgaagggcg ctatgcatct gatgttcttg ccggtatgga cgcggctatt 960
242 gctgatgggt ttgatgtaat ttcaatatca atgggatttg atgagacccc gttgtatgaa 1020
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246 gcaggaaatg cagggccagc gctagggagc ttgcacaatg gaatcccatg gacgttaact 1140
248 gttgcagctg gaaccattga ccgttcattt gcaggcacta taactcttgg gagtggggaa 1200

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252 tataacaaga cttactctgc atgcaactca actcgattat tatctcaact ccgaactgac 1320
254 gccatcatcg tatgcgaaga agctgaagat tcggtatctg agcaaatatc tgttgtcagt 1380
256 gcatcgaaac ttccggggagc catatttggt tcagattatg atgctgaatt atttgaactt 1440
258 ggtggtgtga ctattcctgg tgcgtgatt agcaccaagg atgcaccggc tgtgatcagc 1500
260 tacgccagca atgatgtgaa acctaaggca agcatcaagt tccaacaaac tgttctgggc 1560
262 acaaaagctg caccagccgt ggctttctat acttctagag gtccgtcacc gagctatcca 1620
264 ggcattctaa agccagatat aatggccctt gggtcactag ttttctgctg ttggattcca 1680
266 aatactgcta cagcccaaat tggtttgaat accctcttga caagtgaata caatatgggt 1740
268 tctggaacat caatggcctg ccctcatgct gctggtgtag ctgctctcct taaggcgca 1800
270 caccctgaat ggagtgcagc tgctattagg tctgcaatga tgactacagc aaatcccttg 1860
272 gataacacac taaatccaat ccggggacaat ggtctaatac atttcacatc tgcttcacct 1920
274 ttagctatgg gagccggcca agttgatcct aatcggggcac ttgatcctgg tttgatttat 1980
276 gaaaccaccc cacaagatta tgtgagcctc ctctgcaact tgaacttcac ccaaaaccaa 2040
278 atcctgtcca ttacaagatc aaaccgttac agctgtctca cccctaatac tgatcttaac 2100
280 tatccttctt ttattacttt aactacaac acaaatgcaa catttggtca gacttttcac 2160
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292 cacaactgtg ggaataatcg acgtttatga acccagaata agttgtttgg tcgtcttcaa 2520
294 cattatcata aaggacttga atcatgtgtg ttgattttct gcaaaaaaaaaa aaaaaaaaaa 2580
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299 &lt;210&gt; SEQ ID NO: 9

300 &lt;211&gt; LENGTH: 2325

301 &lt;212&gt; TYPE: DNA

302 &lt;213&gt; ORGANISM: Pilocarpus Heterophyllus (encoding part of cDNA encoding for

W--&gt; 303 heterocarpine)

305 &lt;400&gt; SEQUENCE: 9

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308 gcggtctctc atgctaactc aagttcggat gagagatcaa catatatagt tcatatggac 120
310 aagaccata tgcccaaaac cttctctagc cccaccattt ggtactcttc ggtcgttcga 180
312 tccctcaagt ctacaaagcc aaccaaatta aatcgccgtc gatcctcacc acttcttgta 240
314 tactcttacg acaatgctgc tcatggtttc agtgcagttt tatctcaaca ggaacttgaa 300
316 actctaaaaa agtctccagg tttcgtctca gtttatgccg ataagacagc gacacttgac 360
318 accaccata cacctgaatt tctctccctg aatactgcca acgggttggt gcctgcttca 420
320 aagtatggtg aagatataat tgttggtgtt attgacagcg gtgtctggcc ggagagttaa 480
322 agttataatg atgatggtat gggcgctatt ccaagcagat ggaagggaga atgtgaagct 540
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326 aagggtatca ttgcggcaaa tcctgggatt aacattagca tgaaatctgc cagagatact 660
328 atggggcatg ggactcacac atcctccaca gttgctggga attatgtgga tggcgtttca 720
330 ttctttggct atgctaaagg tacagcaaaa ggagtggcac cacgggcgag agtggctatg 780
332 tacaaggtca tttttgacga agggcgctat gcactgatg ttcttgccgg tatggacgag 840
334 gctattgctg atgggtgttg tgtaatttca atatcaatgg gatttgatga gaccccggtg 900
336 tatgaagatc ctatagcaat tgctcattc gctgctacag agaaggggcg agtgggtctca 960
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340 ttaactgttg cagctggaac cattgaccgt tcatttgtag gcactataac tcttgggagt 1080
342 ggggaaacca tcattggatg gacaatgttc ccagccagtg cttatgtagc agacttgcca 1140

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362 ggcgcacacc ctgaatggag tgcagctgct attaggtctg caatgatgac tacagcaaat 1740
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366 tcacctttag ctatgggagc cggccaagtt gatcctaatac gggcacttga tcctgggttg 1860
368 atttatgaaa ccaccccaca agattatgtg agcctcctct gcactctgaa cttcacccaa 1920
370 aaccaaattcc tgtccattac aagatcaaac cgttacagct gctccacccc taatcctgat 1980
372 cttaactatc cttcttttat tactttacac tacaacacaa atgcaacatt tgttcagact 2040
374 tttcacagga ctgtgactaa cgttggagga agcgtacaa cttacaaggc caagatcact 2100
376 gctcctctag gttctgtagt tagtgtctca ccagacacat tggccttcag aaagcagtat 2160
378 gagcagcaga gctacgagct cactattgag tacaagcctg atggtgaaga aactgtttca 2220
380 tttggggaac ttgtttgat tgaagaaaat ggaatcaca ctgtgaggag ccctattaca 2280
382 gtgtcacctt ccatgagtaa ctttgtgtt atgggtacac aataa 2325

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385 &lt;210&gt; SEQ ID NO: 10

386 &lt;211&gt; LENGTH: 774

387 &lt;212&gt; TYPE: PRT

388 <213> ORGANISM: *Pilocarpus heterophyllus* (heterocarpaceae)

390 &lt;400&gt; SEQUENCE: 10

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393 1 5 10 15
396 Trp Leu Leu Leu Ala Ala Leu His Ala Asn Ser Ser Ser Asp Glu Arg
397 20 25 30
400 Ser Thr Tyr Ile Val His Met Asp Lys Thr His Met Pro Lys Thr Phe
401 35 40 45
404 Ser Ser Pro His His Trp Tyr Ser Ser Val Val Arg Ser Leu Lys Ser
405 50 55 60
408 Thr Lys Pro Thr Lys Leu Asn Arg Arg Arg Ser Ser Pro Leu Leu Val
409 65 70 75 80
412 Tyr Ser Tyr Asp Asn Ala Ala His Gly Phe Ser Ala Val Leu Ser Gln
413 85 90 95
416 Gln Glu Leu Glu Thr Leu Lys Lys Ser Pro Gly Phe Val Ser Val Tyr
417 100 105 110
420 Ala Asp Lys Thr Ala Thr Leu Asp Thr Thr His Thr Pro Glu Phe Leu
421 115 120 125
424 Ser Leu Asn Thr Ala Asn Gly Leu Trp Pro Ala Ser Lys Tyr Gly Glu
425 130 135 140
428 Asp Ile Ile Val Gly Val Ile Asp Ser Gly Val Trp Pro Glu Ser Glu
429 145 150 155 160
432 Ser Tyr Asn Asp Asp Gly Met Gly Ala Ile Pro Ser Arg Trp Lys Gly
433 165 170 175
436 Glu Cys Glu Ala Gly Gln Glu Phe Asn Ser Ser Met Cys Asn Ser Lys
437 180 185 190

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**VERIFICATION SUMMARY**

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L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:78 M:259 W: Allowed number of lines exceeded, <213> ORGANISM:

L:142 M:259 W: Allowed number of lines exceeded, <213> ORGANISM:

L:303 M:259 W: Allowed number of lines exceeded, <213> ORGANISM: